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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,612	10/26/2001	David W. Boll	10012888-1	9732

22879 7590 12/15/2004

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EXAMINER

GAGLIOSTRO, KEVIN M

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/005,612	BOLL, DAVID W.	
	Examiner	Art Unit	
	Kevin M. Gagliostro	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/26/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 3 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/26/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "A simplified digital camera interface for retrieving and viewing of digital images with specially configured buttons."

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for rejections under this section made in this office action:

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1, 4, 6, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,310,648 to Miller et al.

Miller clearly shows all the limitations recited in claim 1. See figure 1A (items 22, 24, and 26) and column 4 (lines 12-18). Referring to claim 1, Miller shows an image display control interface consisting of a first button (figure 1A, item 24) configured to change an image shown by the display to the next most recently captured image, and a second button (figure 1A, item 26) configured to change an image shown by the display to the next previously captured image (as explained in column 4, lines 12-18).

Miller clearly shows all the limitations recited in claim 4. See figure 1B (items 22, 42, and 44) and column 5 (lines 13-29). Referring to claim 4, Miller shows a display interface comprising a memory to store data from the captured images (figure 1B, item 42) (column 5, lines 13-15), and a processor attached to the memory (figure 1B, item 44) (column 5, lines 24-29) that receives signals from the first and second button (figure 1B, item 22) (column 5, lines 21-23). Miller also shows a processor unit capable of retrieving data from the memory associated with the captured images (figure 1B, items 42 and 44) (column 5, lines 14-23).

Miller clearly shows all the limitations recited in claim 6. See figure 1A (item 24). Referring to claim 6, Miller shows a right pointing arrow icon residing on the first button (figure 1A, item 26).

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Miller clearly shows all the limitations recited in claim 7. See figure 1A (item 26). Referring to claim 7, Miller shows a left pointing arrow icon residing on the first button (figure 1A, item 24).

Miller clearly shows all the limitations recited in claim 8. See figure 1A (items 22, 24, and 26) and column 4 (lines 12-18). Referring to claim 8, Miller shows an image displaying method consisting of a first button (figure 1A, item 24) upon actuating, is configured to change an image shown by the display to the next most recently captured image, and a second button (figure 1A, item 26) upon actuating, is configured to change an image shown by the display to the next previously captured image (as explained in column 4, lines 12-18).

4. Claim 15 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,384,863 to Bronson.

Bronson clearly shows all the limitations recited in claim 15. See column 3 (lines 49-55) and figure 2a. Referring to claim 15, Bronson discusses a simplified image display control interface (command control buttons) consisting of buttons (see figure 2a) for displaying a previous image, displaying next image, and deleting displayed image (column 3, lines 49-50) in no particular order. Since the buttons shown in Bronson are representative of a multitude of configurations, the cited buttons for displaying a previous image, displaying a next image, and deleting the displayed image could in fact be seen as buttons 1, 2, and 3 describes in claim 15.

Claim Rejections - 35 USC § 103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 103 that form the basis for rejections under this section made in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 6,310,648 to Miller et al in view U.S. Patent No. 6,441,854 to Fellegara et al and further in view of U.S. Patent No. 6,710,801 to Kubo.

Regarding claim 2, Miller discloses the display interface of claim 1, but does not teach (a) the first button being further configured to display a live preview when there

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is no next most recently captured image, and wherein (b) the second button is further configured to turn off the display when there is no next previously captured image. With respect to the limitation (b) above, Fellegara teaches a LCD power (figure 5, item 150) that can be separately enabled and disabled by the camera controller (figure 5, item 68 and figure 5, item 120) in order to conserve power (column 9, line 67 and column 19, line 18). In order to conserve energy, Fellegara also teaches that it is advantageously to return the LCD to an inactive state 3 after a predetermined time period (column 1, lines 59-62). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the second button (figure 1A, item 26) of Miller to turn off the display after displaying the oldest captured image. One would have been motivated to make such a modification in view of the suggestion in Miller that it is important to have an interface to have as few buttons as possible (column 1, lines 34-43).

With respect to the limitation (a), Fellegara explicitly teaches that any time after the capture of an image and before the capture of the next image, the quick review switch (figure 5, item 37) can be activated to display the most recently captured image (column 13, lines 24-31). It is well known in the art that a live preview image is displayed before capturing of a next image, as taught in Kubo (column 8, lines 15-33). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first button (figure 1A, item 24) of Miller to switch the display a live preview after displaying the most recently captured image. One would have been motivated to make such as modification in view of the suggestion in Miller that it is important to have an interface to have as few buttons as possible (column 1, lines 34-43).

7. Claim 5, 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 6,310,648 to Miller et al in view of U.S. Patent No. 6,346,937 to Sasaki et al.

Regarding claim 5, Miller discloses the image display control interface of claim 1 wherein the first button (figure 1A, item 24) is configured to change an image shown by the display to the next most recently captured image and the second button (figure 1A, item 26) configured to change an image shown by the display to the next previously captured image (as explained in column 4, lines 12-18), but does not teach both buttons further being configured to turn the display on when it is off. Sasaki teaches when no operation has been performed for a predetermined length in time the display unit (LCD) will shut off automatically and will only be restarted by the mechanical operation of a predetermined "switching device" on the camera controller itself (column 1, lines 38-48). A predetermined "switching device" on the camera controller can be interpreted as any of the controller buttons. Therefore it would have been obvious to one skilled in the art at the time the invention was made to modify the first and second buttons of Miller such that they are capable of turning the display back on when it is off as disclosed by Sasaki. One would have been motivated to make such a modification in view of the suggestion in Miller that it is

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important to have an interface to have as few buttons as possible (column 1, lines 34-43).

Regarding claim 12, Miller discloses the image display method of claim 8 consisting of a first button (figure 1A, item 24) upon actuating, is configured to change an image shown by the display to the next most recently captured image, and a second button (figure 1A, item 26) upon actuating, is configured to change an image shown by the display to the next previously captured image (as explained in column 4, lines 12-18). However, Miller does not teach a third button that deletes data associated with the image shown on the display when a third control button is actuated. Sasaki teaches a third button (figure 1, item D) for erasing an image recorded on the memory card and in the display (column 3, lines 47-50). Therefore it would have been obvious to modify the first and second buttons of Miller such that they additionally have a third button for deleting an image recorded in memory as disclosed by Sasaki. One would have been motivated to make such a modification in view of the suggestion in Miller that it is important to have an interface to have as few buttons as possible and encourage interaction that is as intuitive as possible (column 1, lines 34-43).

Regarding claim 13, Miller in view of Sasaki teaches the method with the third button as disclosed in claim 12, but does not teach a method further comprising the displaying of a current image detected by an image sensor when no data is available. Please note that in determining if the data associated with the image shown on the display is available for deleting when the third button is actuated is by default the function of the button; else wise the button would not work. Sasaki discloses a camera capable of reviewing the last captured image (or current image) regardless of whether the removable memory is attached which holds data (column 1, lines 41-50). Therefore, it would have been obvious to one familiar in the art to take the first, second, and third buttons of Miller and Sasaki and give the camera the capability of displaying the current image detected by an image sensor when no data is available. One would have been motivated to modify Miller and Sasaki in order to allow the camera operator to view the last captured image (column 1, lines 21-50).

Regarding claim 14, Miller teaches the method with the first and second buttons as disclosed in claim 8, but does not teach a method comprising turning the display off and on in response to the actuation of one of the first and second control buttons when the display is off. Sasaki discloses that when no operation has been preformed for a predetermined length in time, the display unit (LCD) will shut off automatically and will only be restarted by the mechanical operation of a "predetermined switching device" on the camera controller itself (column 1, lines 28-48). Therefore, it would have been obvious to anyone familiar in the art that a "predetermined switching device" on the camera controller can be interpreted as any of the controller buttons, including the first and second buttons of Miller. One would have been motivated to combine the two buttons of Miller to turn the device back on

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after it has automatically turned off in order to provide an interface to have as few buttons as possible and encourage interaction that is as intuitive as possible (column 1, lines 34-43).

8. Claim 9, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 6,310,648 to Miller et al in view of U.S. Patent No. 6,441,854 to Fellegara et al.

Regarding claim 9, Miller discloses the image display method of claim 8 consisting of a first button (figure 1A, item 24) upon actuating, is configured to change an image shown by the display to the next most recently captured image (as explained in column 4, lines 12-18). Please note that upon achieving this, a method is by default used for the determination of when the next most recently captured image is available; else wise the button would not work. However, Miller does not teach the displaying of a current image detected by an image sensor when the next most recently captured image is not available. Fellegara teaches a quick review of the last captured image or working image on the display which is stored in the cameras own non-volatile memory or working memory (column 1, lines 52-65). This in fact constitutes the displaying of a current image that was previously detected by an image sensor (commonly known means of capturing an image) when the next most recently captured image is not available, due to the fact the last captured image can be removed even when the removable memory medium has been detached from the camera (column 1, lines 44-50). Therefore it would have been obvious to one skilled in the art at the time the invention was made to modify the first button of Miller such that it additionally displays the current image previously detected when the next most recently captured image is not available as disclosed by Fellegara. One would have been motivated to make such a modification in view of the suggestion in Fellegara that it would be desirable to be able to review the last captured image regardless of whether the removable memory medium was attached to the camera (column 1, lines 41-43).

Regarding claim 10, Miller teaches the method with the first button as disclosed in claim 8, but does not teach a method further comprising the step of turning off the display in response to the actuation of the first button when the current image is displayed. Fellegara discloses the display screen going inactive (turning off) after a predetermined period of time after being in quick review mode which displays the working image or the last captured image (column 1, lines 58-61). Therefore it would have been obvious to one familiar in the art to have taken the first button of Miller and further give the display screen the capability of turning off while displaying the current image of Fellegara. One would have been motivated to combine the two in that discontinuing the review signal (turning off the display) would conserve energy, thus saving the life of the battery (Fellegara column 1, line 61).

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Regarding claim 11, Miller teaches the method with the second button as disclosed in claim 8, but does not teach a method further comprising the step of turning off the display in response to the actuation of the second button when the next previously captured image is not available. Please note in determining if the next previously captured image is available for displaying on the display when the second button is actuated is by default the function of the button; else wise the button would not work. Fellegara discloses the display screen going inactive (turning off) after a predetermined period of time after being in quick review mode which displays the working image or the last captured image (column 1, lines 58-61). Fellegara further discloses a camera capable of reviewing the last captured image regardless of whether the removable memory is attached, or by default meaning that previously captured images are not available for viewing, since they were stored in the removable memory (column 1, lines 41-50). Therefore it would have been obvious to one familiar in the art to have taken the second button of Miller and further give the display screen the capability of turning off when the previously captured images are not available for viewing. One would have been motivated to combine the two in that discontinuing the review signal (turning off the display) would conserve energy, thus saving the life of the battery (column 1, line 61).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 6,384,863 to Bronson et al in view of U.S. Patent No. 6,346,937 to Sasaki et al.

Regarding claim 17, Bronson teaches a system with the first, second, and third buttons as disclosed in claim 15, but does not teach a system further comprising a means for turning the display back on in response to the actuation of the first, second, and third buttons when the display is off. Sasaki discloses that when no operation has been preformed for a predetermined length in time, the display unit (LCD) will shut off automatically and will only be restarted by the mechanical operation of a "predetermined switching device" on the camera controller itself (column 1, lines 28-48). Therefore, it would have been obvious to anyone familiar in the art that a "predetermined switching device" on the camera controller can be interpreted as any of the controller buttons, including the first, second, and third buttons of Bronson. One would have been motivated to combine the two buttons of Bronson to turn the device back on after it has automatically turned off in that it offers enhanced user friendliness and safety when operating from an external power source (column 1, lines 66-2 of column 2).

10. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,441,854 to Fellegara in view of U.S. Patent No. 6,710,801 to Kubo. Claims 19-20 will be discussed first.

Regarding claim 19, Fellegara teaches a display interface for displaying images comprising a digital image capture device (figure 2, item 10) and (column 3, lines 13-14) consisting of the following:

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A display or LCD residing on the digital image capture device configured to display an image (figure 5, item 36) and (column 3, lines 18-19).

A simplified image display control interface or camera controller (figure 6, item 68) and (column 3, lines 21-22), which further consists of:

A first button configured to display a most recent capture image (quick review switch) (figure 5, item 37) and (column 13, lines 36-45) and a

Second button (switch) (figure 5, item 52) configured to display an oldest captured image (column 3, lines 18-19).

Claim 19 differs from Fellegara in that the claim further requires (a) the first button configured to display a live preview after displaying the most recently captured image and (b) the second button configured to turn off the display after displaying the oldest captured image. With respect to the limitation (b) above, Fellegara teaches a LCD power (figure 5, item 150) that can be separately enabled and disabled by the camera controller (figure 5, item 68 and figure 5, item 120) in order to conserve power (column 9, line 67 and column 19, line 18). In order to conserve energy, Fellegara also teaches that it is advantageously to return the LCD to an inactive state³ after a predetermined time period (column 1, lines 59-62). In light of the teaching from Fellegara, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to configure the second button (figure 5, item 52) to turn off the display after displaying the oldest captured image in order in order to conserve power.

With respect to the limitation (a), Fellegara explicitly teaches that any time after the capture of an image and before the capture of the next image, the quick review switch (figure 5, item 37) can be activated to display the most recently captured image (column 13, lines 24-31). It is well known in the art that a live preview image is displayed before capturing of a next image, as taught in Kubo (column 8, lines 15-33). In light of the teaching from Kubo, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the switch (figure 5, item 37) of Fellegara to display a live preview after displaying the most recently capturing image in order to allow the user to preview the next image for quality purposes.

As to claim 20, Fellegara teaches a digital camera (figure 2, item 10) and (column 3, lines 13-14).

Regarding claim 18, it is a method claim corresponding to the apparatus claim of 19. Therefore claim 18 is analyzed and rejected as previously discussed with respect to claim 19. Fellegara teaches that the camera controller (figure 5, item 120) is preferably implemented using a Motorola power PC based reduced instruction set (RISC) microcontroller (column 7, lines 48-55). It is inherent that the RISC has a computer readable medium for storing a program to control displaying of images on the LCD (figure 5, item 36)).

Allowable Subject Matter

11. Claims 3 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. The following statement is a statement of reasons for the indication of allowable subject matter: Regarding claim 3, the Prior Art also fails to teach or suggest the display interface of claim 1, further comprising a third button configured to delete data associated with the image shown by the display, wherein the third button is further configured to turn off the display when there is no data associated with the image shown by the display to delete. Regarding claim 16, the Prior art also fails to teach or suggest the method of claim 12 further comprising the steps of determining if the data associated with the image shown on the display is available for deleting when the third control button is actuated; and displaying a current image detected by an image sensor when the data is not available.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Gagliostro whose telephone number is 703-308-6070. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Gagliostro

12/09/2004



NGOC-YEN VU
PRIMARY EXAMINER